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| NEWS         | 1         | Web Page URLs for STN Seminar Schedule - N. America  |
| NEWS         | 2         | "Ask CAS" for self-help around the clock   |
| NEWS         | 3 FEB 28  | PATDPAFULL - New display fields provide for legal status data from INPADOC   |
| NEWS         | 4 FEB 28  | BABS - Current-awareness alerts (SDIs) available   |
| NEWS         | 5 MAR 02  | GBFULL: New full-text patent database on STN   |
| NEWS         | 6 MAR 03  | REGISTRY/ZREGISTRY - Sequence annotations enhanced   |
| NEWS         | 7 MAR 03  | MEDLINE file segment of TOXCENTER reloaded   |
| NEWS         | 8 MAR 22  | KOREAPAT now updated monthly; patent information enhanced  |
| NEWS         | 9 MAR 22  | Original IDE display format returns to REGISTRY/ZREGISTRY  |
| NEWS         | 10 MAR 22 | PATDPASPC - New patent database available  |
| NEWS         | 11 MAR 22 | REGISTRY/ZREGISTRY enhanced with experimental property tags  |
| NEWS         | 12 APR 04 | EPFULL enhanced with additional patent information and new fields  |
| NEWS         | 13 APR 04 | EMBASE - Database reloaded and enhanced  |
| NEWS         | 14 APR 18 | New CAS Information Use Policies available online  |
| NEWS         | 15 APR 25 | Patent searching, including current-awareness alerts (SDIs), based on application date in CA/Caplus and USPATFULL/USPAT2 may be affected by a change in filing date for U.S. applications. |
| NEWS         | 16 APR 28 | Improved searching of U.S. Patent Classifications for U.S. patent records in CA/Caplus   |
| NEWS         | 17 MAY 23 | GBFULL enhanced with patent drawing images   |
| NEWS         | 18 MAY 23 | REGISTRY has been enhanced with source information from CHEMCATS   |
| NEWS         | 19 JUN 06 | STN Patent Forums to be held in June 2005  |
| NEWS         | 20 JUN 06 | The Analysis Edition of STN Express with Discover! (Version 8.0 for Windows) now available   |
| NEWS         | 21 JUN 13 | RUSSIAPAT: New full-text patent database on STN  |
| NEWS         | 22 JUN 13 | FRFULL enhanced with patent drawing images   |
| NEWS         | 23 JUN 20 | MEDICONF to be removed from STN  |
| NEWS         | 24 JUN 27 | MARPAT displays enhanced with expanded G-group definitions and text labels   |
| NEWS EXPRESS | JUNE 13   | CURRENT WINDOWS VERSION IS V8.0, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005   |
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|  | ENTRY      | SESSION |
| FULL ESTIMATED COST  | 0.42       | 0.42    |

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=> S Electrospinning  
L1 1712 ELECTROSPINNING

=> s 11 and (fiber# or fibrous)  
L2 1438 L1 AND (FIBER# OR FIBROUS)

=> s 12 and composite#  
L3 331 L2 AND COMPOSITE#

=> s 13 and (biodegrad? or bioabsorb? or absorb? or resorb?)  
L4 120 L3 AND (BIODEGRAD? OR BIOABSORB? OR ABSORB? OR RESORB?)

=> s 14 and diameter#  
L5 101 L4 AND DIAMETER#

=> s 15 and (glycolide or lactide or dioxanone or caprolactone or (trimethylene carbonate) or (ethylene glycol) or lysine or (aliphatic polyester#) or polyglycolide or poly(w)(glycolide co lactide))  
L6 50 L5 AND (GLYCOLIDE OR LACTIDE OR DIOXANONE OR CAPROLACTONE OR (TRIMETHYLENE CARBONATE) OR (ETHYLENE GLYCOL) OR LYSINE OR (ALIPHATIC POLYESTER#) OR POLYGLYCOLIDE OR POLY(W)(GLYCOLIDE CO LACTIDE))

=> s l6 and (drug delivery)  
1 FILES SEARCHED...  
L7 19 L6 AND (DRUG DELIVERY)

=> d l7 1-19 ibib abs

L7 ANSWER 1 OF 19 USPATFULL on STN  
ACCESSION NUMBER: 2005:130890 USPATFULL  
TITLE: Polymeric nanofibers for tissue engineering and  
**drug delivery**  
INVENTOR(S): Laurencin, Cato T., Earlysville, VA, UNITED STATES  
Nair, Lakshmi Sreedharan, Charlottesville, VA, UNITED STATES  
Bhattacharyya, Subhabrata, Charlottesville, VA, UNITED STATES  
Allcock, Harry R., State College, PA, UNITED STATES  
Bender, Jared D., State College, PA, UNITED STATES  
Brown, Paul W., State College, PA, UNITED STATES  
Greish, Yaser E., State College, PA, UNITED STATES

|                     | NUMBER         | KIND | DATE          |
|---------------------|----------------|------|---------------|
| PATENT INFORMATION: | US 2005112349  | A1   | 20050526      |
| APPLICATION INFO.:  | US 2004-938493 | A1   | 20040910 (10) |

|                       | NUMBER   | DATE          |
|-----------------------|--|---------------|
| PRIORITY INFORMATION: | US 2003-501897P  | 20030910 (60) |
| DOCUMENT TYPE:        | Utility  |               |
| FILE SEGMENT:         | APPLICATION  |               |
| LEGAL REPRESENTATIVE: | PATREA L. PABST, PABST PATENT GROUP LLP, 400 COLONY SQUARE, SUITE 1200, ATLANTA, GA, 30361, US |               |
| NUMBER OF CLAIMS:     | 11   |               |
| EXEMPLARY CLAIM:      | 1  |               |
| LINE COUNT:           | 604  |               |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Polymeric nanofibers have been developed which are useful in a variety of medical and other applications, such as filtration devices, medical prosthesis, scaffolds for tissue engineering, wound dressings, controlled **drug delivery** systems, cosmetic skin masks, and protective clothing. These can be formed of any of a variety of different polymers, either non-degradable or degradable. In a preferred embodiment demonstrated in the following examples, nanofibers are formed of **biodegradable** and non **biodegradable** polyphosphazenes, their blends with other polyphosphazenes or with organic, inorganic/organometallic polymers as well as **composite** nanofibers of polyphosphazenes with nanosized particles such as hydroxyapatites.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 2 OF 19 USPATFULL on STN  
ACCESSION NUMBER: 2004:298709 USPATFULL  
TITLE: Direct injection of nano **fibers** and nano **fiber composites** for biomedical applications  
INVENTOR(S): Jang, Bor Z., UNITED STATES

|                     | NUMBER         | KIND | DATE          |
|---------------------|----------------|------|---------------|
| PATENT INFORMATION: | US 2004234571  | A1   | 20041125      |
| APPLICATION INFO.:  | US 2003-442561 | A1   | 20030522 (10) |
| DOCUMENT TYPE:      | Utility        |      |               |

FILE SEGMENT: APPLICATION  
LEGAL REPRESENTATIVE: Bor Z Jang, 2902, 28 AVE, S.W., FARGO, ND, 58103  
NUMBER OF CLAIMS: 26  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 3 Drawing Page(s)  
LINE COUNT: 623

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for injecting nanometer-scaled **fibers** directly into an intended body site of a patient. The process includes the steps of (a) preparing a precursor fluid to the **fibers** and (b) injecting the precursor fluid into the intended body site under the influence of an electrical field established between two electrodes to produce the nanometer-scaled **fibers** for forming a reinforcement preform. A polymer is then optionally injected into the intended body site to form a nano **fiber**-polymer **composite** structure. The **composite** structure may contain interconnected macro pores wherein cells can grow and proliferate. This **composite** scaffold is useful for tissue engineering. The injected nano **fibers** and **composite** structure may also be used as a means of controlled drug release or bone reinforcement.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 3 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2004:221774 USPATFULL  
TITLE: Plastic and elastic protein copolymers  
INVENTOR(S): Chaikof, Elliot Lorne, Atlanta, GA, UNITED STATES  
Nagapudi, Karthik, Woodbridge, NJ, UNITED STATES  
Brinkman, William Tumpane, Atlanta, GA, UNITED STATES  
Conticello, Vincent Paul, Decatur, GA, UNITED STATES  
McMillan, Robert Andrew, San Francisco, CA, UNITED STATES  
Wright, Elizabeth Rose, Los Angeles, GA, UNITED STATES  
Payne, Sonha Christine, Decatur, GA, UNITED STATES  
PATENT ASSIGNEE(S): Emory University, Atlanta, GA, UNITED STATES, 30322  
(U.S. corporation)

|                     | NUMBER         | KIND | DATE          |
|---------------------|----------------|------|---------------|
| PATENT INFORMATION: | US 2004171545  | A1   | 20040902      |
| APPLICATION INFO.:  | US 2003-720025 | A1   | 20031121 (10) |

|                       | NUMBER             | DATE          |
|-----------------------|--------------------|---------------|
| PRIORITY INFORMATION: | CA 2003-2417634    | 20030129      |
|                       | JP 2003-98691      | 20030401      |
|                       | AU 2003-2003236491 | 20030827      |
|                       | US 2002-428438P    | 20021122 (60) |

DOCUMENT TYPE: Utility  
FILE SEGMENT: APPLICATION  
LEGAL REPRESENTATIVE: GREENLEE WINNER AND SULLIVAN P C, 5370 MANHATTAN CIRCLE, SUITE 201, BOULDER, CO, 80303  
NUMBER OF CLAIMS: 76  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 41 Drawing Page(s)  
LINE COUNT: 5529

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Synthetic protein copolymers with plastic and elastic properties, and methods producing the copolymers, are provided. For example, a BAB triblock copolymer comprises a hydrophilic block and one or more hydrophobic blocks. The mechanical properties of a gel, **fiber**, **fiber** network, or film form of the copolymer are varied by one

or more conditions before or after copolymer production. For example, a copolymer sequence can be varied before production, and one or more processing conditions such as solvent, pH, or temperature can be varied after production.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 4 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2004:203015 USPATFULL

TITLE: **Biodegradable** polymer device

INVENTOR(S): Saltman, Adam, Westborough, MA, UNITED STATES

Gaudette, Glenn, E. Setauket, NY, UNITED STATES

Chen, Weiliam, Mount Sinai, NY, UNITED STATES

Jiang, Hongliang, South Setauket, NY, UNITED STATES

Yun, Yang Hyun, Huntington, NY, UNITED STATES

PATENT ASSIGNEE(S): The Research Foundation of State University of New York  
(U.S. corporation)

|                       | NUMBER   | KIND | DATE          |
|-----------------------|--|------|---------------|
| PATENT INFORMATION:   | US 2004156904  | A1   | 20040812      |
| APPLICATION INFO.:    | US 2003-364877   | A1   | 20030212 (10) |
| DOCUMENT TYPE:        | Utility  |      |               |
| FILE SEGMENT:         | APPLICATION  |      |               |
| LEGAL REPRESENTATIVE: | PITNEY HARDIN LLP, 7 TIMES SQUARE, NEW YORK, NY,<br>10036-7311 |      |               |
| NUMBER OF CLAIMS:     | 22   |      |               |
| EXEMPLARY CLAIM:      | 1  |      |               |
| NUMBER OF DRAWINGS:   | 14 Drawing Page(s)   |      |               |
| LINE COUNT:           | 641  |      |               |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides a composition and method for preparing a biomedical device capable of delivering pharmaceutical or biomedical materials from a PEG-g-chitosan matrix. By combining a PEG-g-chitosan and a water insoluble polymer in a nonaqueous solvent, a matrix is obtained which can be used as a delivery vehicle for pharmaceuticals and biomedical materials.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 5 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2004:154524 USPATFULL

TITLE: Electrospun **fibers** and an apparatus therefor

INVENTOR(S): Smith, Daniel J., Stow, OH, United States

Reneker, Darrell H., Akron, OH, United States

McManus, Albert T., San Antonio, TX, United States

Schreuder-Gibson, Heidi L., Holliston, MA, United States

Mello, Charlene, Rochester, MA, United States

Sennett, Michael S., Sudbury, MA, United States

PATENT ASSIGNEE(S): The University of Akron, Akron, OH, United States (U.S. corporation)

|                     | NUMBER         | KIND | DATE         |
|---------------------|----------------|------|--------------|
| PATENT INFORMATION: | US 6753454     | B1   | 20040622     |
| APPLICATION INFO.:  | US 2000-571841 |      | 20000516 (9) |

|                       | NUMBER          | DATE          |
|-----------------------|-----------------|---------------|
| PRIORITY INFORMATION: | US 1999-158677P | 19991008 (60) |
| DOCUMENT TYPE:        | Utility         |               |
| FILE SEGMENT:         | GRANTED         |               |

PRIMARY EXAMINER: Lucchesi, Nicholas D.  
ASSISTANT EXAMINER: Hamilton, Lalita M  
LEGAL REPRESENTATIVE: Roetzel & Andress  
NUMBER OF CLAIMS: 17  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 5 Drawing Figure(s); 5 Drawing Page(s)  
LINE COUNT: 1225

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel **fiber** comprising a substantially homogeneous mixture of a hydrophilic polymer and a polymer which is at least weakly hydrophobic is disclosed. The **fiber** optionally contains a pH adjusting compound. A method of making the **fiber** comprises **electrospinning fibers** of the substantially homogeneous polymer solution. A method of treating a wound or other area of a patient requiring protection from contamination comprises **electrospinning** the substantially homogeneous polymer solution to form a dressing. An apparatus for **electrospinning** a wound dressing is disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 6 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2004:144772 USPATFULL

TITLE: Native protein mimetic **fibers, fiber** networks and fabrics for medical use

INVENTOR(S): Chaikof, Elliot L, Atlanta, GA, UNITED STATES  
Conticello, Vincent, Atlanta, GA, UNITED STATES  
Huang, Lei, Duluth, GA, UNITED STATES  
Nagapudi, Karthik, Atlanta, GA, UNITED STATES

|                       | NUMBER   | KIND | DATE          |
|-----------------------|--|------|---------------|
| PATENT INFORMATION:   | US 2004110439  | A1   | 20040610      |
| APPLICATION INFO.:    | US 2003-258207   | A1   | 20030221 (10) |
|                       | WO 2001-US12918  |      | 20010420      |
| DOCUMENT TYPE:        | Utility  |      |               |
| FILE SEGMENT:         | APPLICATION  |      |               |
| LEGAL REPRESENTATIVE: | Greenlee Winner and Sullivan, Suite 201, 5370 Manhattan Circle, Boulder, CO, 80303 |      |               |
| NUMBER OF CLAIMS:     | 20   |      |               |
| EXEMPLARY CLAIM:      | 1  |      |               |
| NUMBER OF DRAWINGS:   | 29 Drawing Page(s)   |      |               |
| LINE COUNT:           | 1951   |      |               |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present disclosure provides spun **fibers** of proteins useful for the **fibers, fiber** networks and nonwoven fabrics for medical use, with these materials characterized by good biocompatibility properties (e.g., low tendency toward thromboses and inflammation when implanted into a human or animal). These materials can be fabricated from gelatin, collagen or elastin-mimetic proteins, functionalized proteins of the foregoing types, crosslinked functionalized proteins of the foregoing types, and there may be incorporated nonproteinaceous polymers and/or therapeutic proteins or other medicinal compounds. Additionally, there may be living cells colonized on the material of the present invention or living cells may be incorporated during the fabrication process. These materials can be used in medical applications including, without limitation, vascular grafts, reinforcement of injured tissue, wound healing, artificial organs and tissues, prosthetic heart valves and prosthetic ureters.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 7 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2004:100800 USPATFULL  
 TITLE: **Biodegradable and/or bioabsorbable fibrous** articles and methods for using the articles for medical applications  
 INVENTOR(S): Chu, Benjamin, Setauket, NY, UNITED STATES  
 Hsiao, Benjamin S., Setauket, NY, UNITED STATES  
 Fang, Dufei, Painted Post, NY, UNITED STATES  
 Brathwaite, Collin, Setauket, NY, UNITED STATES  
 PATENT ASSIGNEE(S): The Research Foundation of State University of New York. (U.S. corporation)

|                       | NUMBER  | KIND | DATE          |
|-----------------------|---|------|---------------|
| PATENT INFORMATION:   | US 2004076661   | A1   | 20040422      |
| APPLICATION INFO.:    | US 2003-719290  | A1   | 20031121 (10) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2003-375329, filed on 27 Feb 2003, GRANTED, Pat. No. US 6689374 Division of Ser. No. US 2001-859007, filed on 16 May 2001, GRANTED, Pat. No. US 6685956 |      |               |
| DOCUMENT TYPE:        | Utility   |      |               |
| FILE SEGMENT:         | APPLICATION   |      |               |
| LEGAL REPRESENTATIVE: | HOFFMANN & BARON, LLP, 6900 JERICHO TURNPIKE, SYOSSET, NY, 11791  |      |               |
| NUMBER OF CLAIMS:     | 60  |      |               |
| EXEMPLARY CLAIM:      | 1   |      |               |
| NUMBER OF DRAWINGS:   | 14 Drawing Page(s)  |      |               |
| LINE COUNT:           | 1447  |      |               |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Biodegradable and/or bioabsorbable fibrous** articles and methods for using the articles in medical applications are disclosed. The **biodegradable and/or bioabsorbable fibrous** articles, which are formed by elctrospinning **fibers of biodegradable and/or bioabsorbable** fiberizable material, comprise a **composite** (or asymmetric **composite**) of different **biodegradable and/or bioabsorbable fibers**. Articles having specific medical uses include an adhesion-reducing barrier and a controlled delivery system. The methods include methods for reducing surgical adhesions, controlled delivery of a medicinal agent and providing controlled tissue healing.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 8 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2004:67980 USPATFULL  
 TITLE: Coated stent and method for coating by treating an electrospun covering with heat or chemicals  
 INVENTOR(S): Greenhalgh, Skott E., Perkasio, PA, UNITED STATES  
 Kiefer, Rob, Telford, PA, UNITED STATES  
 Fox, Ann M., Doylestown, PA, UNITED STATES

|                     | NUMBER         | KIND | DATE          |
|---------------------|----------------|------|---------------|
| PATENT INFORMATION: | US 2004051201  | A1   | 20040318      |
| APPLICATION INFO.:  | US 2002-313835 | A1   | 20021206 (10) |

|                       | NUMBER  | DATE          |
|-----------------------|---|---------------|
| PRIORITY INFORMATION: | US 2002-372721P   | 20020411 (60) |
| DOCUMENT TYPE:        | Utility   |               |
| FILE SEGMENT:         | APPLICATION   |               |
| LEGAL REPRESENTATIVE: | INSKEEP & ASSOCIATES, INC., 26949 BOLAN LANE, PALOS VERDES PENINSULA, CA, 90274 |               |

NUMBER OF CLAIMS: 116  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 11 Drawing Page(s)  
LINE COUNT: 2120  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A versatile covering process enabled through the identification and manipulation of a plurality of variables present in the **electrospinning** method of the present invention. By manipulating and controlling various identified variables, it is possible to use **electrospinning** to predictably produce thin materials having desirable characteristics. The **fibers** created by the **electrospinning** process have **diameters** averaging less than 100 micrometers. Proper manipulation of the identified variables ensures that these **fibers** are still wet upon contacting a target surface, thereby adhering with each other to form a cloth-like material and, if desired, adhering to the target surface to form a covering thereon. The extremely small size of these **fibers**, and the resulting interstices therebetween, provides an effective vehicle for drug and radiation delivery, and forms an effective membrane for use in fuel cells.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 9 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2003:324375 USPATFULL

TITLE: **BIODEGRADABLE AND/OR BIOABSORBABLE FIBROUS ARTICLES AND METHODS FOR USING THE ARTICLES FOR MEDICAL APPLICATIONS**

INVENTOR(S): Chu, Benjamin, Setauket, NY, UNITED STATES  
Hsiao, Benjamin S., Setauket, NY, UNITED STATES  
Fang, Dufei, Painted Post, NY, UNITED STATES  
Brathwaite, Collin, Setauket, NY, UNITED STATES

PATENT ASSIGNEE(S): The Research Foundation at State University of New York (U.S. corporation)

|                       | NUMBER   | KIND | DATE          |
|-----------------------|--|------|---------------|
| PATENT INFORMATION:   | US 2003228350  | A1   | 20031211      |
|                       | US 6689374   | B2   | 20040210      |
| APPLICATION INFO.:    | US 2003-375329   | A1   | 20030227 (10) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2001-859007, filed on 16 May 2001, PENDING |      |               |
| DOCUMENT TYPE:        | Utility  |      |               |
| FILE SEGMENT:         | APPLICATION  |      |               |
| LEGAL REPRESENTATIVE: | HOFFMANN & BARON, LLP, 6900 JERICHO TURNPIKE, SYOSSET, NY, 11791   |      |               |
| NUMBER OF CLAIMS:     | 29   |      |               |
| EXEMPLARY CLAIM:      | 1  |      |               |
| NUMBER OF DRAWINGS:   | 13 Drawing Page(s)   |      |               |
| LINE COUNT:           | 1347   |      |               |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Biodegradable** and/or bioabsorbable **fibrous** articles and methods for using the articles in medical applications are disclosed. The **biodegradable** and/or bioabsorbable **fibrous** articles, which are formed by elctrospinning **fibers** of **biodegradable** and/or **bioabsorbable** fiberizable material, comprise a **composite** (or asymmetric **composite**) of different **biodegradable** and/or **bioabsorbable fibers**. Articles having specific medical uses include an adhesion-reducing barrier and a controlled delivery system. The methods include methods for reducing surgical adhesions, controlled delivery of a medicinal agent and providing controlled tissue healing.



CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 10 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2003:299914 USPATFULL  
TITLE: Stent having electrospun covering and method  
INVENTOR(S): Greenhalgh, Skott E., Perkasio, PA, UNITED STATES  
Kiefer, Rob, Telford, PA, UNITED STATES  
Schwartz, Robert S., Rochester, MN, UNITED STATES

|                     | NUMBER         | KIND | DATE          |
|---------------------|----------------|------|---------------|
| PATENT INFORMATION: | US 2003211135  | A1   | 20031113      |
| APPLICATION INFO.:  | US 2002-313161 | A1   | 20021206 (10) |

|                       | NUMBER  | DATE          |
|-----------------------|---|---------------|
| PRIORITY INFORMATION: | US 2002-372721P   | 20020411 (60) |
| DOCUMENT TYPE:        | Utility   |               |
| FILE SEGMENT:         | APPLICATION   |               |
| LEGAL REPRESENTATIVE: | OPPENHEIMER WOLFF & DONNELLY LLP, 840 NEWPORT CENTER DRIVE, SUITE 700, NEWPORT BEACH, CA, 92660 |               |
| NUMBER OF CLAIMS:     | 116   |               |
| EXEMPLARY CLAIM:      | 1   |               |
| NUMBER OF DRAWINGS:   | 9 Drawing Page(s)   |               |
| LINE COUNT:           | 2126  |               |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A versatile covering process enabled through the identification and manipulation of a plurality of variables present in the **electrospinning** method of the present invention. By manipulating and controlling various identified variables, it is possible to use **electrospinning** to predictably produce thin materials having desirable characteristics. The **fibers** created by the **electrospinning** process have **diameters** averaging less than 100 micrometers. Proper manipulation of the identified variables ensures that these **fibers** are still wet upon contacting a target surface, thereby adhering with each other to form a cloth-like material and, if desired, adhering to the target surface to form a covering thereon. The extremely small size of these **fibers**, and the resulting interstices therebetween, provides an effective vehicle for drug and radiation delivery, and forms an effective membrane for use in fuel cells.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 11 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2003:277584 USPATFULL  
TITLE: Covering and method using **electrospinning** of very small **fibers**  
INVENTOR(S): Greenhalgh, Skott E., Perkasio, PA, UNITED STATES  
Kiefer, Rob, Telford, PA, UNITED STATES  
Schwartz, Robert S., Rochester, MN, UNITED STATES

|                     | NUMBER         | KIND | DATE          |
|---------------------|----------------|------|---------------|
| PATENT INFORMATION: | US 2003195611  | A1   | 20031016      |
| APPLICATION INFO.:  | US 2002-314086 | A1   | 20021206 (10) |

|                       | NUMBER          | DATE          |
|-----------------------|-----------------|---------------|
| PRIORITY INFORMATION: | US 2002-372721P | 20020411 (60) |
| DOCUMENT TYPE:        | Utility         |               |
| FILE SEGMENT:         | APPLICATION     |               |

LEGAL REPRESENTATIVE: James W. Inskeep, Oppenheimer Wolff & Donnelly LLP,  
Suite 700, 840 Newport Center Drive, Orange County, CA,  
92660  
NUMBER OF CLAIMS: 116  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 11 Drawing Page(s)  
LINE COUNT: 2126

AB A versatile covering process enabled through the identification and manipulation of a plurality of variables present in the **electrospinning** method of the present invention. By manipulating and controlling various identified variables, it is possible to use **electrospinning** to predictably produce thin materials having desirable characteristics. The **fibers** created by the **electrospinning** process have **diameters** averaging less than 100 micrometers. Proper manipulation of the identified variables ensures that these **fibers** are still wet upon contacting a target surface, thereby adhering with each other to form a cloth-like material and, if desired, adhering to the target surface to form a covering thereon. The extremely small size of these **fibers**, and the resulting interstices therebetween, provides an effective vehicle for drug and radiation delivery, and forms an effective membrane for use in fuel cells.

L7 ANSWER 12 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2003:112581 USPATFULL

TITLE: Foam **composite** for the repair or regeneration of tissue

INVENTOR(S): Vyakarnam, Murty N., New York, NY, UNITED STATES  
Zimmerman, Mark C., East Brunswick, NJ, UNITED STATES  
Scopelianos, Angelo George, Whitehouse Station, NJ, UNITED STATES  
Chun, Iksoo, Flemington, NJ, UNITED STATES  
Melican, Mora C., Bridgewater, NJ, UNITED STATES  
Bazilio, Clairene A., Plainfield, NJ, UNITED STATES  
Roller, Mark B., North Brunswick, NJ, UNITED STATES  
Gorky, David V., Flemington, NJ, UNITED STATES

|                       | NUMBER  | KIND | DATE         |
|-----------------------|---|------|--------------|
| PATENT INFORMATION:   | US 2003077311   | A1   | 20030424     |
| APPLICATION INFO.:    | US 2001-938364  | A1   | 20010824 (9) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 1999-469118, filed on 21 Dec 1999, GRANTED, Pat. No. US 6306424 Continuation-in-part of Ser. No. US 1999-345096, filed on 30 Jun 1999, GRANTED, Pat. No. US 6333029 |      |              |
| DOCUMENT TYPE:        | Utility   |      |              |
| FILE SEGMENT:         | APPLICATION   |      |              |
| LEGAL REPRESENTATIVE: | AUDLEY A. CIAMPORCERO JR., JOHNSON & JOHNSON, ONE JOHNSON & JOHNSON PLAZA, NEW BRUNSWICK, NJ, 08933-7003  |      |              |
| NUMBER OF CLAIMS:     | 61  |      |              |
| EXEMPLARY CLAIM:      | 1   |      |              |
| NUMBER OF DRAWINGS:   | 15 Drawing Page(s)  |      |              |
| LINE COUNT:           | 2270  |      |              |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present patent describes a biocompatible **composite** made of a first **fibrous** layer attached to a three-dimensional inter-connected open cell porous foams that have a gradient in composition and/or microstructure through one or more directions. These **composites** can be made from blends of **absorbable** and biocompatible polymers. These biocompatible **composites** are particularly well suited to tissue engineering applications and can be designed to mimic tissue transition or interface zones.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 13 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2003:29878 USPATFULL

TITLE: Collagen or collagen-like peptide containing polymeric matrices

INVENTOR(S): Fertala, Andrzej, Voorhees, NJ, UNITED STATES  
Ko, Frank, Philadelphia, PA, UNITED STATES

|                       | NUMBER  | KIND | DATE         |
|-----------------------|---|------|--------------|
| PATENT INFORMATION:   | US 2003021821   | A1   | 20030130     |
|                       | US 6753311  | B2   | 20040622     |
| APPLICATION INFO.:    | US 2001-895674  | A1   | 20010628 (9) |
| DOCUMENT TYPE:        | Utility   |      |              |
| FILE SEGMENT:         | APPLICATION   |      |              |
| LEGAL REPRESENTATIVE: | LICATLA & TYRRELL P.C., 66 E. MAIN STREET, MARLTON, NJ, 08053 |      |              |
| NUMBER OF CLAIMS:     | 8   |      |              |
| EXEMPLARY CLAIM:      | 1   |      |              |
| LINE COUNT:           | 580   |      |              |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Tissue engineering scaffolds comprising collagen or a collagen-like peptides incorporated within or between polymeric **fibers** and methods for their production are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 14 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2002:312995 USPATFULL

TITLE: Apparatus and methods for **electrospinning** polymeric **fibers** and membranes

INVENTOR(S): Chu, Benjamin, Setauket, NY, UNITED STATES  
Hsiao, Benjamin S., Setauket, NY, UNITED STATES  
Fang, Dufei, Painted Post, NY, UNITED STATES

|                       | NUMBER   | KIND | DATE         |
|-----------------------|--|------|--------------|
| PATENT INFORMATION:   | US 2002175449  | A1   | 20021128     |
|                       | US 6713011   | B2   | 20040330     |
| APPLICATION INFO.:    | US 2001-859004   | A1   | 20010516 (9) |
| DOCUMENT TYPE:        | Utility  |      |              |
| FILE SEGMENT:         | APPLICATION  |      |              |
| LEGAL REPRESENTATIVE: | HOFFMANN & BARON, LLP, 6900 JERICHO TURNPIKE, SYOSSET, NY, 11791 |      |              |
| NUMBER OF CLAIMS:     | 51   |      |              |
| EXEMPLARY CLAIM:      | 1  |      |              |
| NUMBER OF DRAWINGS:   | 15 Drawing Page(s)   |      |              |
| LINE COUNT:           | 1319   |      |              |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An apparatus and methods for **electrospinning** polymer **fibers** and membranes are described. The methods include in one aspect **electrospinning** a polymer **fiber** from a conducting fluid containing the polymer in the presence of a first electric field established between a conducting fluid introduction device and a ground source and modifying the first electric field with a second electric field to form a jet stream of the conducting fluid. In another aspect the methods include forming an **electrospinning** jet stream of the conducting fluid and electrically controlling the flow characteristics of the jet stream. In yet another aspect the methods include forming a plurality of **electrospinning** jet streams of the conducting fluid and independently controlling the flow

characteristics of at least one of the jet streams. The apparatus for **electrospinning** includes a conducting fluid introduction device containing a plurality of **electrospinning** spinnerets for delivering the conducting fluid, a ground member positioned adjacent to the spinnerets, a support member disposed between the spinnerets and the ground member and movable to receive **fibers** formed from the conducting fluid, and a means for controlling the flow characteristics of conducting fluid from at least one spinneret independently from the flow characteristics of conducting fluid from another spinneret. An improved conducting fluid introduction device which includes a plurality of spinnerets, each for independently delivering a controlled quantity of conducting fluid at a controlled pressure or flow rate, the spinnerets being charged at an electric potential and being disposed relative to each other to normally interfere with the electric field produced by adjacent spinnerets, each of the spinnerets having a tip at which conducting fluid exits configured to have an electrostatic field strength at each tip stronger than the liquid surface tension at each of the tips is also described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 15 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2002:308088 USPATFULL

TITLE: **Biodegradable** and/or **bioabsorbable fibrous** articles and methods for using the articles for medical applications

INVENTOR(S): Chu, Benjamin, Setauket, NY, UNITED STATES  
Hsiao, Benjamin S., Setauket, NY, UNITED STATES  
Fang, Dufei, Painted Post, NY, UNITED STATES  
Brathwaite, Collin, Setauket, NY, UNITED STATES

|                       | NUMBER   | KIND | DATE         |
|-----------------------|--|------|--------------|
| PATENT INFORMATION:   | US 2002173213  | A1   | 20021121     |
|                       | US 6685956   | B2   | 20040203     |
| APPLICATION INFO.:    | US 2001-859007   | A1   | 20010516 (9) |
| DOCUMENT TYPE:        | Utility  |      |              |
| FILE SEGMENT:         | APPLICATION  |      |              |
| LEGAL REPRESENTATIVE: | HOFFMANN & BARON, LLP, 6900 JERICHO TURNPIKE, SYOSSET, NY, 11791 |      |              |
| NUMBER OF CLAIMS:     | 113  |      |              |
| EXEMPLARY CLAIM:      | 1  |      |              |
| NUMBER OF DRAWINGS:   | 13 Drawing Page(s)   |      |              |
| LINE COUNT:           | 1607   |      |              |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Biodegradable** and/or **bioabsorbable fibrous** articles and methods for using the articles in medical applications are disclosed. The **biodegradable** and/or **bioabsorbable fibrous** articles, which are formed by elctrospinning **fibers** of **biodegradable** and/or **bioabsorbable** fiberizable material, comprise a **composite** (or asymmetric **composite**) of different **biodegradable** and/or **bioabsorbable fibers**. Articles having specific medical uses include an adhesion-reducing barrier and a controlled delivery system. The methods include methods for reducing surgical adhesions, controlled delivery of a medicinal agent and providing controlled tissue healing.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 16 OF 19 USPATFULL on STN

ACCESSION NUMBER: 2001:184869 USPATFULL

TITLE: Foam **composite** for the repair or regeneration

INVENTOR(S): of tissue  
 Vyakarnam, Murty N., New York, NY, United States  
 Zimmerman, Mark C., East Brunswick, NJ, United States  
 Scopelianos, Angelo George, Whitehouse Station, NJ,  
 United States  
 Chun, Iksoo, Flemington, NJ, United States  
 Melican, Mora C., Bridgewater, NJ, United States  
 Bazilio, Clairene A., Plainfield, NJ, United States  
 Roller, Mark B., North Brunswick, NJ, United States  
 Gorky, David V., Flemington, NJ, United States  
 PATENT ASSIGNEE(S): Ethicon, Inc., Somerville, NJ, United States (U.S.  
 corporation)

|                       | NUMBER   | KIND | DATE         |
|-----------------------|--|------|--------------|
| PATENT INFORMATION:   | US 6306424   | B1   | 20011023     |
| APPLICATION INFO.:    | US 1999-469118   |      | 19991221 (9) |
| RELATED APPLN. INFO.: | Continuation-in-part of Ser. No. US 1999-345096, filed<br>on 30 Jun 1999 |      |              |
| DOCUMENT TYPE:        | Utility  |      |              |
| FILE SEGMENT:         | GRANTED  |      |              |
| PRIMARY EXAMINER:     | Acquah, Samuel A.  |      |              |
| NUMBER OF CLAIMS:     | 39   |      |              |
| EXEMPLARY CLAIM:      | 1  |      |              |
| NUMBER OF DRAWINGS:   | 17 Drawing Figure(s); 15 Drawing Page(s)                                 |      |              |
| LINE COUNT:           | 2151   |      |              |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present patent describes a biocompatible **composite** made of  
 a first **fibrous** layer attached to a three-dimensional  
 inter-connected open cell porous foams that have a gradient in  
 composition and/or microstructure through one or more directions. These  
**composites** can be made from blends of **absorbable** and  
 biocompatible polymers. These biocompatible **composites** are  
 particularly well suited to tissue engineering applications and can be  
 designed to mimic tissue transition or interface zones.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 17 OF 19 EPFULL COPYRIGHT 2005 EPO/FIZ KA on STN

ACCESSION NUMBER: 2003:98602 EPFULL  
 DATA UPDATE DATE: 20040811  
 DATA UPDATE WEEK: 200433  
 TITLE (ENGLISH): Plastic and elastic protein copolymers  
 TITLE (FRENCH): Plastique et copolymeres de proteines elastiques  
 TITLE (GERMAN): Kunststoff und elastische Proteincopolymere  
 INVENTOR(S): Chaikof, Elliot Lorne, 150 Wicksford Glen, Atlanta, GA  
 30350, US; Nagapudi, Karthik, 43B Woodbridge Terrace,  
 Woodbridge, NJ 07095, US; Brinkman, William, 1116  
 Amsterdam Avenue, Atlanta, GA 30306, US; Conticello,  
 Vincent Paul, 2473 Harrington Drive, Decatur, GA 30033,  
 US; McMillan, Robert Andrew, 1039 Dolores Street, San  
 Francisco, CA 94110, US; Wright, Elizabeth Rose, 123  
 South Figueroa St., Apt. 709, Los Angeles, CA 90012,  
 US; Payne, Sonha Christine, 2473 Harrington Drive,  
 Decatur, GA 30033, US  
 PATENT APPLICANT(S): Emory University, 1784 North Decatur Road, North  
 Decatur Building, Suite 130, Atlanta, Georgia 30322,  
 US  
 PATENT APPL. NUMBER: 3041243  
 AGENT: Denness, James Edward, et al, Abel & Imray, 20 Red Lion  
 Street, London WC1R 4PQ, GB  
 AGENT NUMBER: 94731

LANGUAGE OF FILING: English  
 LANGUAGE OF PUBL.: English  
 LANGUAGE OF PROCEDURE: English  
 LANGUAGE OF TITLE: German; English; French  
 DOCUMENT TYPE: Patent  
 PATENT INFO TYPE: EPA8 Correction - reprint of title page of EPA-document  
 PATENT INFORMATION:

|                    | NUMBER  | KIND | DATE     |
|--------------------|---|------|----------|
|                    | EP 1422242  | A8   | 20040811 |
| DESIGNATED STATES: | AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI |      |          |
|                    | LU MC NL PT RO SE SI SK TR                            |      |          |
| APPLICATION INFO.: | EP 2003-257349  | A    | 20031121 |
| PRIORITY INFO.:    | US 2002-428438P                                       | P    | 20021122 |
|                    | CA 2003-2417634                                       | A    | 20030129 |
|                    | JP 2003-98691   | A    | 20030401 |
|                    | AU 2003-236491  | A    | 20030827 |

L7 ANSWER 18 OF 19 EPFULL COPYRIGHT 2005 EPO/FIZ KA on STN

ACCESSION NUMBER: 2001:110164 EPFULL  
 UPDATE DATE PUBLICAT.: 20050601  
 DATA UPDATE DATE: 20050601  
 DATA UPDATE WEEK: 200522  
 TITLE (ENGLISH): Biocompatible foam **composite**  
 TITLE (FRENCH): Mousse **composite** biocompatible  
 TITLE (GERMAN): Biovertraeglicher Verbundschaum  
 INVENTOR(S): Vyakarnam, Murty N., 529 West 111th St. Apt. 42, NY 10025, US; Zimmerman, Mark C., 21 Agate Road, East Brunswick, NJ 08816, US; Scopelianos, Angelo George, 7 John Stevens Rd., Whitehouse Station, NJ 08889, US; Melican, Mora C., 2701 Johnson Circle, Bridgewater, NJ 08807, US; Bazilio, Clairene A., 82 Deborah Court, Plainfield, NJ 07062, US; Roller, Mark B., 9 Quince Place, North Brunswick, NJ 08902, US; Gorky, David V., 18 Copper Penny Rd., Flemington, NJ 08822, US; Chun, Iksoo, 253 Spruce Court, Flemington, NJ 08822, US  
 PATENT APPLICANT(S): ETHICON, INC., (Ethicon Inc.), U.S. Route 22, Somerville, New Jersey 08876, US  
 PATENT APPL. NUMBER: 291330  
 AGENT: Mercer, Christopher Paul, et al, Carpmiels & Ransford 43, Bloomsbury Square, London WC1A 2RA, GB  
 AGENT NUMBER: 46611

LANGUAGE OF FILING: English  
 LANGUAGE OF PUBL.: English  
 LANGUAGE OF PROCEDURE: English  
 LANGUAGE OF TITLE: German; English; French  
 DOCUMENT TYPE: Patent  
 PATENT INFO TYPE: EPA1 Application published with search report  
 PATENT INFORMATION:

|                    | NUMBER         | KIND | DATE       |
|--------------------|----------------|------|------------|
|                    | EP 1234587     | A1   | 20020828   |
| DESIGNATED STATES: | DE FR GB IT    |      |            |
| APPLICATION INFO.: | EP 2001-301703 | A    | 20010226   |
| PRIORITY INFO.:    | EP 2001-301703 | A    | 20010226 * |

ABEN

The present patent describes a biocompatible **composite** made of a first **fibrous** layer attached to a three-dimensional inter-connected open cell porous foams that have a gradient in composition and/or microstructure through one or more directions. These **composites** can be made from blends of **absorbable** and

biocompatible polymers. These biocompatible **composites** are particularly well suited to tissue engineering applications and can be designed to mimic tissue transition or interface zones.

L7 ANSWER 19 OF 19 EPFULL COPYRIGHT 2005 EPO/FIZ KA on STN

ACCESSION NUMBER: 2000:98020 EPFULL  
UPDATE DATE PUBLICAT.: 20050223  
DATA UPDATE DATE: 20050223  
DATA UPDATE WEEK: 200508  
TITLE (ENGLISH): ELECTROSPUN **FIBERS** AND AN APPARATUS THEREFOR  
TITLE (FRENCH): FIBRES FILEES ELECTRIQUEMENT ET APPAREIL CORRESPONDANT  
TITLE (GERMAN): ELEKTROGESPONNENE FASERN UND VORRICHTUNG HIERZU  
INVENTOR(S): SMITH, Daniel, 2988 Ridgeline Trail, Stow, OH 44224, US; RENEKER, Darrell, 300 Hampshire Road, Akron, OH 44313, US; MCMANUS, Albert, 13830 Morningbluff Dr, San Antonio, TX 78216, US; SCHREUDER-GIBSON, Heidi, 1196 Highland Street, Holliston, MA 01746, US; MELLO, Charlene, 99 Bradford Lane, Rochester, MA 02770, US; SENNETT, Michael, 41 Stonebrook Rd., Sudbury, MA 01776, US; GIBSON, Phillip, 1196 Highland Street, Holliston, MA 01746, US  
PATENT APPLICANT(S): The University of Akron, (Akron, The University of), 302 E. Buchtel Avenue, Akron Ohio 44325, US  
PATENT APPL. NUMBER: 768400  
AGENT: Makovski, Priscilla Mary, et al, BARKER BRETTTELL 138 Hagley Road, Edgbaston Birmingham B16 9PW, GB  
AGENT NUMBER: 50261  
LANGUAGE OF FILING: English  
LANGUAGE OF PUBL.: English  
LANGUAGE OF PROCEDURE: English  
LANGUAGE OF TITLE: German; English; French  
DOCUMENT TYPE: Patent  
PATENT INFO TYPE: EPB1 Granted patent  
PATENT INFORMATION:  
PATENT INFORMATION:

| NUMBER     | KIND | DATE     |
|------------|------|----------|
| NUMBER     | KIND | DATE     |
| EP 1220958 | B1   | 20040303 |

DESIGNATED STATES: WO 2001027365 20010419  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

APPLICATION INFO.: EP 2000-972034 A 20001006  
WO 2000-US27776 A 20001006  
PRIORITY INFO.: US 1999-158677P P 19991008  
US 2000-571841 A 20000516

CITED NON PATENT LIT.: DZENIS, Y.A.: "Polymer Hybrid Nano/micro composites" PROCEEDINGS OF THE AMERICAN SOCIETY FOR COMPOSITES- NINTH TECHNICAL CONFERENCE, 1994, pages 657-65, XP000978395;  
BAUER JOSEPH A ET AL: "Evaluation of linear polyethyleneimine/nitric oxide adduct on wound repair: Therapy versus toxicity." WOUND REPAIR AND REGENERATION, vol. 6, no. 6, November 1998 (1998-11), pages 569-577, XP000978321 ISSN: 1067-1927

CITED PATENT LIT.: EP 303496 A  
WO 9803267 A  
US 4043331 A  
US 4345414 A